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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,510	08/17/2001	Yasuhiro Fukuzaki	IS11-002	6297
21567	7590	11/23/2004	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			ROSENBERGER, RICHARD A	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/932,510	Applicant(s) FUKUZAKI, YASUHIRO	
	Examiner Richard A Rosenberger	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the first and second paragraphs of 35 U.S.C.

112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-7 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as not being supported by the disclosure as filed and/or as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The instant specification broadly includes four embodiments, see paragraphs [0004] and [0005] on pages 2 and 3 for a general discussion of the four types of devices. There are specific discussions of an first embodiment with a device using a pointing device with a light emitting portion (paragraph [0025], page 13, *et seqq.*), an second embodiment with a pointing device with a retroreflecting portion (paragraph [0033], page 18, *et seqq.*), and a third embodiment with a retroreflecting frame that detects a shadow of a pointer (paragraph [0037], pages 19 and 20). Additionally, there is a mention in passing of a fourth type of system, with a illuminated frame (paragraph [0017], page 8) in which there is “a light projecting frame which projects the light directly”, as differentiated from projecting the light “indirectly” and in the third embodiment with a retroreflecting frame.

Independent claims 1 and 9 have been amended, by the amendment dated 12 January 2004, to limit the scope of those claims to include the language that the device and methods claimed have a “pointing device having a light emitting means”, thus limiting the claims to the first two of these embodiments. However, claims 4-7 and 12-15 contain language which explicitly refer to the third and/or fourth embodiments. In claims 4 and 12, for example, the pointing device “intercepts the light from the light projecting frame” which creates a detected “incident shadow”, which is not consistent with the disclosure in the specification and their respective independent claims. Intercepting the light and creating a shadow is not, and is not disclosed as, being a function of a light emitting means or a pointing device having a light emitting means. Thus these claims are not supported by the specification and/or are unclear as to their intended scope.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsikos (US 4,507,557) in view of Ogawa (US 6,100,538).

Tsikos shows a position detecting device of the type claimed that has a flat board (10) having a position detecting area. There are optical units (36, 38) in at least two positions adjacent to the position detecting area of the flat board; the signals therefrom are used to calculate the detected position by triangulation (column 5, line 51). Each optical unit comprises a one-dimensional light receiving element array having a plurality of light receiving elements (column 5, line 38-39). Figure 7 of the reference shows a circuit with a sequential output circuit outputting sequentially an analog value of an output of the one-dimensional light receiving array (the 8-BIT ADDRESS COUNTER 46 and D OUT of the dram imagers). As set forth in the patent, the output of the DRAM imager is the charge on a capacitor (column 5, lines 29-31 and 34-35; this will produce an analog signal since the capacitor need not discharge totally depending upon the light level. There is a clock circuit (42) which supplies a timing signal to the sequential output circuit. Built into the 8-BIT LATCH is an output level comparing circuit which judged whether the output from the sequential output circuit is higher or lower than a predetermined voltage level (thus "deciding" whether to latch or not), and converting the analog signal into a digital timing signal; the address which is latched into the latch circuit is a direct indication of the time at which the output of the DRAM IMAGER triggered the latch, and the value latched is a digital value. The latch itself is a "variation timing measuring circuit" which obtains, from the ADDRESS COUNTER, a variation in timing of the output level comparing circuit.

The pointed position is determined by obtaining the incident angle of the pointing device (see θ_1 and θ_2 in figure 1).

The device of Tsikos has light source means (LEDs 16 and 18) adjacent the optical units (see figure 4) and retroreflective means (14) on a frame for retroreflecting light from the light source means. This produces a shadow image of the pointer device on the detector array. The variation timing measuring circuit of figure 7 detects both a start timing and end timing of transitions from light to shadow and shadow to light (one in latch 84, the other in latch 86) to determine the center of the light or shadow. Figure 6 shows a filter circuit (see also column 7, lines 3-6) which as describes is a low-pass filter; column 7, lines 49-51, teaches that the low pass filtering is present in the embodiment of figure 7.

Tsikos shows using an opaque, shadow-producing object. It is known in the art that a similar system the systems can use illuminated pointer devices that produce on the detector a bright, rather than dark, image of the pointer; Ogawa shows such a known system in which a light-emitting stylus is used in such an arrangement; not the detectors 3L and 3R. It would have been obvious to us such an detection circuit such as is shown by Tsikos in such a using a bright image of the pointing device because it is a known alternative arrangement for obtaining the position of the pointing device, and the modifications to the circuitry of Tsikos is simple, straightforward, and well within the skill of those in the art. Tsikos detects the transitions for dark to light and light to dark to determine the position of the

pointer; detecting the transitions from dark to light and light to dark for this same purpose in the same manner requires nothing beyond the ordinary skill of adapting a known circuit to a art-recognized similar system performing the same task in substantially the same manner.

5. The response filed 22 September 2004 have been considered but have not been found to be persuasive.

It is noted that the response did not correct the problems noted with claims 4-7 and 12-15 of combining different embodiments in an incompatible manner, nor did it point out in the specification where support for such a combination of embodiments may be found that the Examiner may have missed.

The remarks relative to the rejection of claims 1-3, 8-11 and 16 present the differences between type of systems Tsikos and of Ogawa as being far more different than they in fact are, particularly in the type of circuitry used to interpret the results. The use of the circuitry of Tsikos in a bright-pointer system rather than a dark-pointer system requires no major redesign or modification; the system already detects both the transitions from dark to light and from light to dark, which is what is required for the system of Ogawa.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

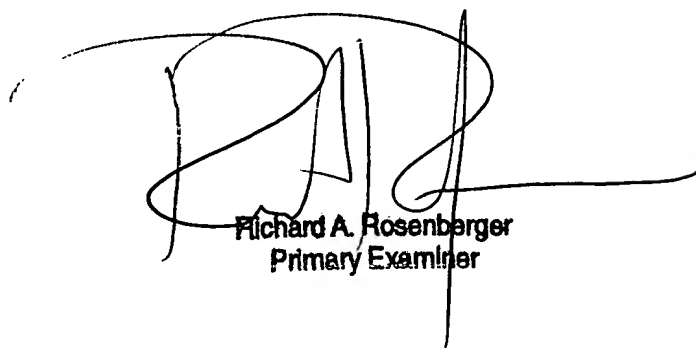
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
15 November 2004



Richard A. Rosenberger
Primary Examiner